Relative Pocket of Need (for Pb)

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$$\mathrm{RPoN_{Pb}} = \mathrm{P}/\mathrm{Area} \bullet (F_1 - F_2)$$

Relative Pocket of Need (Lead) Main Equation

RPoN = Relative Pocket of Need

$\mathrm{RPoN_{Pb}}$ = Relative Pocket of Need for Lead

P = Population of Interest

Area = Area

F_1 = Main Factor 1 (Intensifying Factor)

F_2 = Main Factor 2 (Mitigating Factor)

Relative Pocket of Need (Lead) Main Factor Equation

$$F_n = \left(\left(\left(\mathrm{M_S}/\sum \mathrm{M}\right) \bullet \mathrm{V_S}\right) + \left(\left(\mathrm{M_R}/\sum \mathrm{M}\right) \bullet \mathrm{V_R}\right) + \left(\left(\mathrm{M_{Pb}}/\sum \mathrm{M}\right) \bullet \mathrm{V_{Pb}}\right)\right)$$

F_n = Main Factor Equation

M = Main Factor Modifier

$\mathrm{M_S}$ = Main Factor Modifier for Social Need

$\mathrm{M_R}$ = Main Factor Modifier for Rental Need

$\mathrm{M_{Pb}}$ = Main Factor Modifier for Lead Need

$\sum \mathrm{M}$ = Sigma M (The sum of Main Factor Modifiers)

$\mathrm{V_S}$ = Social Sub-Factor

$\mathrm{V_R}$ = Rental Sub-Factor

$\mathrm{V_{Pb}}$ = Lead Sub-Factor

Relative Pocket of Need Sub-Factor Equations (F_1 & F_2 Main Factors)

$$\mathrm{V_{f1}} = \left(\left(\mathrm{m_1}/\sum \mathrm{m}\right) \bullet e^{\left(\mathrm{xv_1} - \bar{\mathrm{X}}\mathrm{v_1}/\mathrm{SDv_1}\right)}\right) + \ldots \left(\left(\mathrm{m_n}/\sum \mathrm{m}\right) \bullet e^{\left(\mathrm{xv_n} - \bar{\mathrm{X}}\mathrm{v_n}/\mathrm{SDv_n}\right)}\right)$$

$$\mathrm{V_{f2}} = \left(\left(\mathrm{m_1}/\sum \mathrm{m}\right) \bullet e^{-\left(\mathrm{xv_1} - \bar{\mathrm{X}}\mathrm{v_1}/\mathrm{SDv_1}\right)}\right) + \ldots \left(\left(\mathrm{m_n}/\sum \mathrm{m}\right) \bullet e^{-\left(\mathrm{xv_n} - \bar{\mathrm{X}}\mathrm{v_n}/\mathrm{SDv_n}\right)}\right)$$

$\mathrm{V_{f1}}$ = Intensification Sub-Factor

$\mathrm{V_{f2}}$ = Mitigation Sub-Factor

m = Sub-Factor Modifier

$\mathrm{m_S}$ = Sub-Factor Modifier for Social Need

$\mathrm{m_R}$ = Sub-Factor Modifier for Rental Need

$\mathrm{m_{Pb}}$ = Sub-Factor Modifier for Lead Need

$\sum \mathrm{m}$ = Sigma m (The sum of Sub-Factor Modifiers)

e = The Natural Number aka Base of Natural Algorithms corresponds to 2.7182818284590452…

$\mathrm{xv_1}$ = Individual Factor score for specific area of investigation

$\bar{\mathrm{X}}\mathrm{v_1}$ = Mean of Individual Factor Scores for all areas of interest

$\mathrm{SDv_1}$ = Standard Deviation of Individual Factor Scores for all areas of interest